ACQUISITION CANDIDATE REVIEW

ACQUISITION CANDIDATE REVIEW

Prepared For:

BOEING COMPUTER SERVICES

JUNE 1980

ACQUISITION CANDIDATE REVIEW

- i -

TABLE OF CONTENTS

INTRODUCTION

INTRODUCTION

- The purpose of this study was to perform an initial evaluation of nine potential acquisition candidates for Boeing Computer Services. The information INPUT attempted to obtain on each company was as follows:

    - Company officers/directors.

    - Stock distribution/ownership.

    - Location of offices (sales and data centers) and dates established.

    - Mainframe and operating system configurations in data centers.

    - Network employed.

    - Number of employees.

    - Number of sales and technical staff by branch office.

    - Major product lines, proprietary offerings, if any, and number of years offered.

    - Markets, market growth and sales strategies.

    - Revenue distribution if other than 100% RCS.

- Recently audited comparative financials.

- Revenue and profitability rates for the past several years.

- Assessment of the company's future potential.

• The nine companies interviewed were:

- Bowne Information Systems.

- The Computer Company

- Computer Data Systems.

- Consolidated Computer Corporation.

- Cybertek Computer Products.

- Distribution Sciences.

- Financial Technology.

- McSweeney and Associates.

- Proprietary Computer Systems.

• Of the original list of nine companies, McSweeney & Associates was substitu-
ted for Colorado Computer Center. This substitution was necessary because
Colorado Computer was in the process of being acquired by Citicorp.

• On-site interviews were conducted with each of the nine companies during
May and June of 1980.

BOWNE INFORMATION SYSTEMS

BOWNE INFORMATION SYSTEMS, INC.
160 Water Street
New York, NY 10038
(212) 952-4400

William B. Mahoney, President
Subsidiary of Bowne & Company, a
 Public Corporation
Employees: 250
Revenue, Fiscal Year End
 10/31/79: $11,648,000

COMPANY BACKGROUND

- Bowne Information Systems, Inc. (BIS) was formed in 1969 by its parent, Bowne & Company, to provide automated services in connection with the parent's financial printing activities.

- BIS developed its original approach to the marketplace by being one of the pioneers in the offering of word processing as an on-line, remote computer service and by staying with this service while some of its major competitors, notably IBM and VIP Systems, folded their operations.

- In addition to processing services, BIS sells its software separately, operates several word processing service centers, and is currently developing a distributed processing capability. All services are directed toward office automation.

- The majority of BIS's growth has been through internal development. One acquisition was made in 1978: Integrated Word Processing, Inc., a word processing service organization based in New York.

- The only blemish on BIS's record was a lawsuit filed by Proprietary Computer Systems in 1979 claiming that a BIS employee (David Herr) gained access and deliberately changed some of PCS's internal files. David Herr was found guilty and was sentenced to performing community services for one year.

COMPANY OFFICERS

- Ted Helweg, Vice President, Cyberway Division.

- David Herr, Vice President, Business Development.

- Nugent McMillan, Vice President, Computer Services.

- Ben Mathews, Vice President, Finance.

- Dick Pavley, Director of Marketing.

- Paul Ebeltoft, Sales Manager for Network Services and Cyberway.

FINANCIAL INFORMATION

- BIS has averaged a 22% compounded growth rate over the last five years. FY 1979 revenues were $11.6 million, up 14% over FY 1978's $10.2 million. Pretax profit margins were a financial disaster in 1979. From a pretax income of $1.3 million in FY 1978 (13%), FY 1979 earnings came in at an all-time low of $46,000, or less than 1%.

    - Management attributes the decline to increased costs for expanding Cyberway offices to five additional cities, increased development and marketing expenses, and a general gearing up for a higher level of business than it could obtain.

    - The major problem appeared to be with the Cyberway Division. In addition to capital outlays for additional office space and new equipment, BIS was inexperienced in the business of selling people (primarily word processing operators) and estimating production jobs.

    - A five-year financial summary follows:

BIS
FIVE-YEAR FINANCIAL SUMMARY
(FYE 10/31, $ THOUSAND)

	1979	1978	1977	1976	1975
Total revenue	$11,648	$10,240	$ 8,310	$ 7,665	$ 5,335
Income before taxes	$ 46	$ 1,314	$ 595	$ 716	$ 586

- One outcome of BIS's poor financial performance in 1979 was that Dale Ries resigned as president. William Mahoney assumed the position on November 1, 1979.

SOURCE OF REVENUE

- Approximately 90-95% of BIS's revenues are derived from processing services (including Cyberway) and 5-10% from software product sales.

EMPLOYEES

- BIS currently has 250 employees, down from 275 a year ago. About half of the employees are located in offices in New York City, with the remainder in field offices.

KEY PRODUCTS AND SERVICES

- The key product of BIS is a proprietary system called Word/One. Word/One is an interactive text processing system which is offered on BIS's network and sold to in-house users.

- In 1979, the company announced its "Bowne Connection" compatibility program. Through this program, Bowne developed the necessary communications software to connect standalone word processors to its central processor.

  - Word processors such as Lanier, Xerox, Lexitron, CPT and Vydec can now be connected directly and Bowne plans to make the BIS system accessible to all major word processing devices.

- Other office automation-related services on the BIS network include:

  - Electronic Mail.

  - Records Management (an information retrieval system).

  - Photocomposition services.

  - Specialized software for formatting complex documents ("Smart Document").

  - High-speed laser printing services.

- New types of software are being introduced which will allow BIS to penetrate deeper into vertical markets which require extensive word processing capabilities. Examples are:

  - Keysearch, a file management system which enables attorneys to organize and retrieve documents in conjunction with major litigation.

  - COMSPEC, a computer-assisted specification preparation service used by architects, engineering firms and government agencies to prepare and edit complex construction specifications. Eight data bases of construction text are accessible through COMSPEC.

    - SPEXTEXT, one of the proprietary data bases, has recently been made available on diskettes for users of Lanier No Problem Typewriters.

- Other proprietary products are:

  - MAILPAC, an electronic mail system.

  - Correspondence Management System, for dissemination of business communications.

- In 1979, BIS announced the formation of a new service division named Cyberway, a word processing service bureau operation.

  - Its predominate business is to provide services for the preparation, storage, accessing, duplication and dissemination of documents through a variety of methods such as computer terminals, typesetting machines, computers, facsimile devices and couriers.

  - Customers are in law, accounting, finance, architecture and engineering, employed by both industry and government.

MARKET STRATEGIES

- The primary objective of BIS is to provide a complete office automation service. To accomplish this, it has two services in place:

  - The "Bowne Connection," or communication links, extends the traditional capabilities of standalone word processing units to provide users with:

    - Access to more sophisticated text processing software for document preparation.

    - An electronic mail system for communicating documents, letters or memoranda anywhere in the U.S.

    - Retrieval of textual information through the Records Management system.

    - Software for formatting complex documents.

    - Production of high-quality documents through its photocomposition services.

  - A word processing service bureau, the Cyberway Division, provides text processing and office automation services to companies which have overflow document production requirements or do not have in-house word processing capabilities.

- Two years ago, BIS began licensing its text processing software to in-house users. This venture has been moderately successful (about ten licensing agreements are currently in effect). BIS plans to increase marketing efforts in this area.

- Probably the most significant new market venture will be its distributed data processing offering.

  - BIS is currently developing its Word/One software for implementation on an IBM 4331.

. Additional software on the 4331 will be editing modules and electronic mail. Access to photocomposition services and the Records Management System will be through the BIS network.

- For 20 work stations, the system will lease for about $10,000 per month. A 60 work station system will range between $15,000-16,000 per month, or a cost of about $250 for each work station.

- The first system is expected to be operational by the last quarter of 1980.

OFFICE LOCATIONS

● In addition to its headquarters location, BIS has offices in the following cities.

- Atlanta: BIS network services and a Cyberway center.

- Boston: BIS network services.

- Chicago: BIS network services and a Cyberway center.

- Houston: BIS network services

- Los Angeles: BIS network services and a Cyberway center.

- New York: two separate locations, both offer BIS network services, one has a Cyberway center.

- Philadelphia: BIS network services.

- San Francisco: BIS network services.

- Washington, D.C.: BIS network services and a Cyberway center.

DATA CENTER

● BIS maintains one data center in New York for its network service. Telenet is currently used for nationwide access, soon to be replaced by Tymnet.

● Equipment at the center consists of two IBM 370/155s, DOS and a 4331.

ASSESSMENT OF BOWNE

- In spite of Bowne's poor financial performance in FY 1979, INPUT believes the company would be an excellent acquisition choice. Bowne's longevity in the word processing marketplace, which is comparable to IBM-OPD's earliest word processing efforts, has given BIS important experience in two crucial areas of the business:

    - Word processing service operations. This experience has enabled BIS to become very cost effective and also to have the flexibility to meet the peak load demands of its customers.

    - Word processing market experience. Knowledge of the marketplace gained over a ten-year period of participation has enabled BIS to recognize and respond to the technological changes, such as in-house equipment, and also to develop a broad spectrum of newer and more functionally powerful services for particular customer and industry segments.

- The significance of this experience is that BIS knows where and how to apply its marketing, sales and new product development efforts, and at the same time has the capabilities to take advantage of this knowledge.

THE COMPUTER COMPANY

THE COMPUTER COMPANY

1905 Westmoreland Street
Richmond, VA 23230
(804) 358-2171

Walter R. T. Witschey, President
Private Corporation
Employees: 650 approximately
Total Revenue FYE 3/80:
  $13,700,000

COMPANY BACKGROUND

- The Computer Company (TCC) was formed in 1968 by four ex-IBM employees to provide facilities management services. In its early years, FM services constituted the majority of TCC's revenues.

- About 1972, TCC entered the Medicaid processing services market by winning a contract to develop a system for the State of Virginia.

- In 1972, TCC bought the Richmond office of a microfilm firm operating out of Philadelphia. This became the nucleus of TCC's Micromedia Division.

- In 1974, TCC merged APL Services, Inc. (a former TCC customer), into the company and formed the TCC APL Timesharing Division.

- Heating Oil Management Systems (HOMS), a Massachusetts firm, was acquired about 1975. HOMS had developed a minicomputer system for degree measurement. TCC subsequently folded the company.

- In 1978, TCC established a Small Systems Division to develop a turnkey system based on TI 990s for group practice accounting and patient tracking. This division was only operational for about a year. TCC stated that it overbuilt the product and frankly was not competent in marketing small business systems.

- TCC currently has four divisions. An approximate revenue distribution of each follows:

Division	% Contribution To Revenue	Revenue Value
Social Services	50%	$ 6,850,000
APL Timesharing	25	3,425,000
Micromedia	15	2,055,000
Commercial Services	10	1,370,000
	100%	$13,700,000

COMPANY OFFICERS

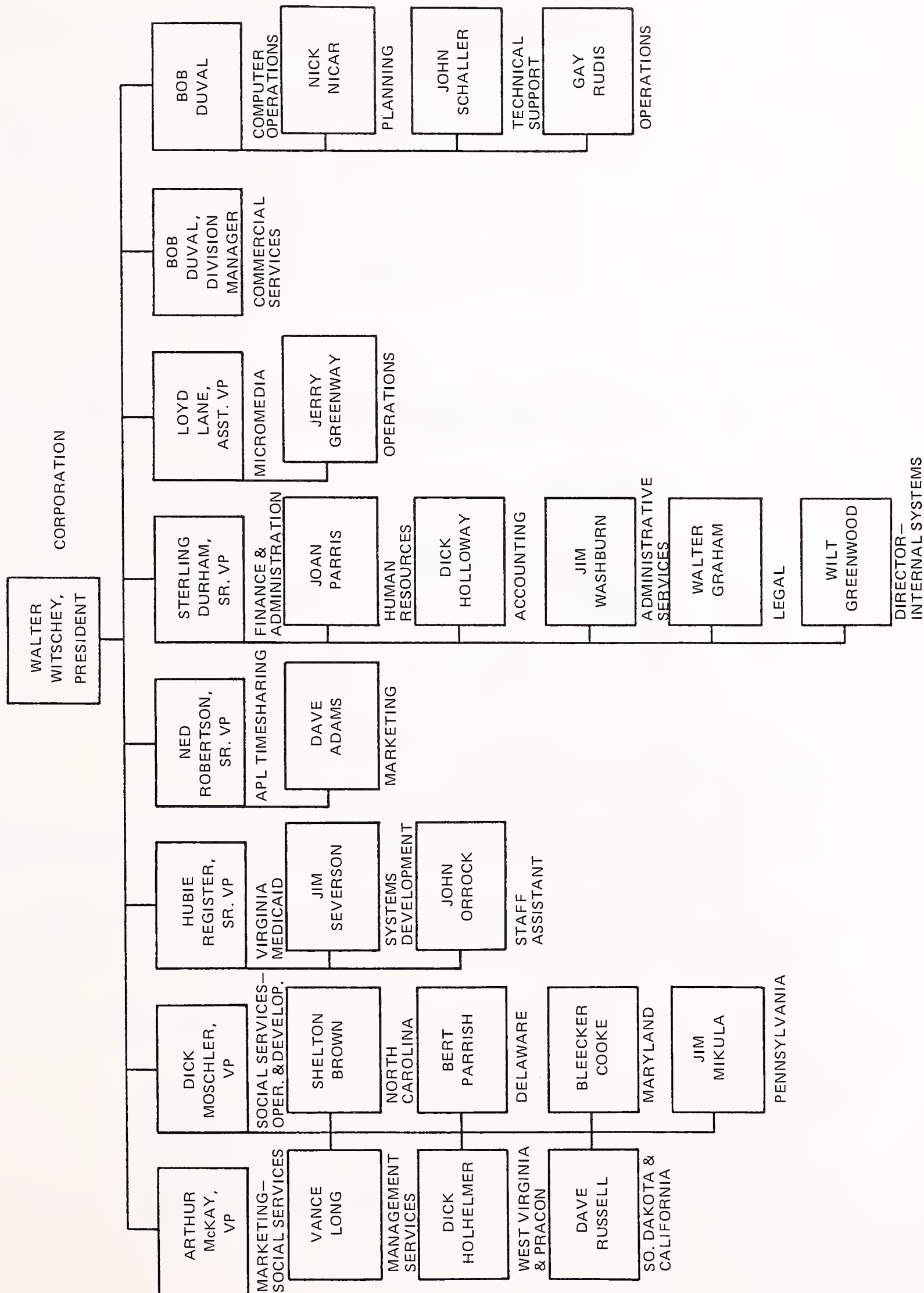● A TCC organization chart is presented in Exhibit A.

FINANCIAL INFORMATION

● A five-year summary of TCC's total revenues follows:

TCC
FIVE-YEAR FINANCIAL SUMMARY
(FYE 3/31, $ Thousand)

	1980	1979	1978	1977	1976
Total Revenues	$13,700	$13,000*	$ 9,700	$ 7,300	$ 6,300
. Percent increase from previous year	5%	34%	33%	16%	13%

* TCC's actual revenues in FY 1979 were $14 million. An additional one-time payment fee of $1 million was received when the New York Medicaid contract was certified.

● TCC's lower growth rate in FY 1980 was attributed to a lack of new revenue in its Medicaid services. Although it did win two contracts, revenues will not be realized until FY 1981.

- The West Virginia contract was temporarily stopped due to EDS contesting the award.

- Revenues from the Pennsylvania contract should contribute $3-5 million in FY 1981.

● Because of TCC's heavy dependence on Medicaid contracts as its primary source of business, its revenue growth can be sporadic.

- State Medicaid contracts normally run for two- or three-year periods. TCC stated that about one-third of all state contracts are up for bid this year. (The company intends to bid on all of them.)

● Delays in payment for Medicaid processing contracts can also impact revenue:

- Contractors do not get paid until claims processing actually starts.

- HEW must certify the software. Once a company receives certification (normally one year after the contract award) a large payment is made.

● INPUT cannot estimate TCC's profitability rate. All attempts to obtain ranges or approximates on pre- and after-tax margins were declined. However, the company did state:

EXHIBIT A

WALTER WITSCHEY, PRESIDENT
CORPORATION

ARTHUR McKAY, VP
MARKETING—SOCIAL SERVICES

DICK MOSCHLER, VP
SOCIAL SERVICES—OPER. & DEVELOP.

HUBIE REGISTER, SR. VP
VIRGINIA MEDICAID

NED ROBERTSON, SR. VP
APL TIMESHARING

STERLING DURHAM, SR. VP
FINANCE & ADMINISTRATION

LOYD LANE, ASST. VP
MICROMEDIA

BOB DUVAL, DIVISION MANAGER
COMMERCIAL SERVICES

BOB DUVAL
COMPUTER OPERATIONS

VANCE LONG
MANAGEMENT SERVICES

SHELTON BROWN
NORTH CAROLINA

JIM SEVERSON
SYSTEMS DEVELOPMENT

DAVE ADAMS
MARKETING

JOAN PARRIS
HUMAN RESOURCES

JERRY GREENWAY
OPERATIONS

NICK NICAR
PLANNING

DICK HOLHELMER
WEST VIRGINIA & PRACON

BERT PARRISH
DELAWARE

JOHN ORROCK
STAFF ASSISTANT

DICK HOLLOWAY
ACCOUNTING

JOHN SCHALLER
TECHNICAL SUPPORT

DAVE RUSSELL
SO. DAKOTA & CALIFORNIA

BLEECKER COOKE
MARYLAND

JIM WASHBURN
ADMINISTRATIVE SERVICES

GAY RUDIS
OPERATIONS

JIM MIKULA
PENNSYLVANIA

WALTER GRAHAM
LEGAL

WILT GREENWOOD
DIRECTOR—INTERNAL SYSTEMS

INPUT

- TCC has not always been profitable. Only during the last three or four years has it experienced steady profitable margins.

- The Maryland Medicaid contract is not profitable.

- Profit margins are getting smaller due to increased competition.

- TCC is running under tight schedules to cut expenses.

● Additionally, the closure of the TCC Small Business Systems Division probably affected the company's 1980 profitability rate.

EMPLOYEES

● With the additional staffing required for the Medicaid contract in Pennsylvania, TCC will have approximately 650 employees by mid-summer. The approximate distribution will be:

-	Management	70
-	Marketing	20
	. APL divisions (12)	
	. Other divisions (8)	
-	Operations	65
-	Data entry	130
-	Clerical	170
-	Systems and programming	195
		650

KEY PRODUCTS AND SERVICES

● Fifty percent of TCC's revenues are derived from processing services and software licensing associated with contracts held by the Social Services Division (Medicaid).

- The following Medicaid contracts are currently held by TCC:

. South Dakota - software development.

. North Carolina - joint contract with EDS. TCC is processing the pharmacy claims.

. Delaware - fiscal agent.

. Maryland - software development.

. Pennsylvania - operations support.

- Virginia - fiscal agent and entire Medicaid.

- West Virginia - claims processing on an RJE basis.

- When TCC can't compete for Medicaid contracts which require large performance bonds, it licenses its claims processing software and operates as a subcontractor to the successful bidder. Software licenses currently exist with:

  - Computer Sciences, California Medicaid.

  - Bradford National, New York Medicaid.

  - System Development Corporation, Florida Medicaid.

  - TCC claims 40% of all Medicaid claims processed are processed by its Medicaid Management Information System software. The federal government's medical program is also using a nucleus of TCC software.

  - In addition to Medicaid, government programs for which the Social Services staff has developed services include the following:

    - New Hampshire Automated Food Stamp Program development.

    - Virginia Social Services Information System pilot projects.

    - Virginia Human Affairs Information System conceptual design.

    - Virginia Welfare Recipient Eligibility System design.

    - Maryland Automated Income Maintenance System development.

    - Virginia Department of Mental Health and Retardation Automated Patient Census and Reimbursement System development.

  - TCC's major competitor for Medicaid processing contracts is Electronic Data Systems.

- TCC's APL Timesharing Division had revenues of approximately $3.4 million in FY 1980. There are about 300 users, with the heaviest concentration of clients in the East Coast region.

  - Major proprietary products on TCC's network are:

    - AIRMARKET, an English-language retrieval system. Originally designed as a tool to access on-line data bases, the system has been expanded to include data bases for the trucking and rail industries, in addition to air traffic. On-line financial and tracking data for these industries allow an analyst to perform a variety of statistical analyses, such as fuel costs, traffic trends and competitive market shares.

- AIRMARKET is the largest revenue-producing product on TCC's network.

. FINAN$EER, a financial planning system, was developed by TCC about a year ago. It is used for strategic profit planning, budget tracking, break-even analysis, flow of funds, manpower planning, lease purchase analysis and debt structure analysis.

. X-PERT is a project scheduling system. Capabilities include easy-to-use report generation, project resource usage tracking, multicalendar scheduling and user-specified input formats.

. ADS, a data management system, provides capabilities for updating, searching and reporting information.

- Other key products are:

. ENERGY, a weekly petroleum data base containing reserve and production information.

. SMRT, Scheduling and Maintenance Review and Tracking System, was designed to meet the needs of the power-generating industry. Subsystems are offered for Maintenance Reporting, Outage Management/Scheduling and Operations Reporting.

- TCC's APL-based services compete with I. P. Sharp and STSC, Inc. I. P. Sharp has a similar data base product for the airlines.

- TCC's Commercial Division, contributing about $1.4 million to FY 1980 revenues, provides data entry, on-line and batch processing, and programming and facilities management services primarily to companies in the Richmond (VA) area.

- TCC is the largest microfilm services vendor in Virginia. With revenues of $2 million, approximately 75% of the Micromedia Division's revenues comes from COM, 5% from source document filming, and 20% from microfilm equipment sales.

MARKET GROWTH

- TCC's Medicaid processing segment has consistently contributed at least 50% of the company's revenue. The company expects this area to continue to provide the majority of its revenues.

- The APL Timesharing Division is expected to grow at 25% in FY 1981. This division has the highest profit margins.

- A distributed data processing offering is currently being considered.

- Expansion of APL services is targeted at the West Coast, where TCC plans to open more offices.

OFFICE LOCATIONS

- In addition to its headquarters location, TCC maintains offices to support its Medicaid contracts (Social Services Division) in:

  - Sacramento, CA (CSC subcontract office).

  - Newark, DE (TCC contract).

  - Raleigh, NC (TCC contract).

  - Harrisburg, PA (TCC contract).

- Over the last four to five years, the TCC APL Timesharing Division has opened six additional sales offices. (The most recent office was in Los Angeles, opened in 1979).

  - Employees range from two to eight per sales office; a combination of technical and sales personnel are located in each office.

  - There are twelve sales personnel in the Timesharing Division, four of whom are located at headquarters.

  - Field sales offices are in Boston, New York, Houston, Washington, D.C., Phoenix and Los Angeles.

DATA CENTER

- TCC maintains one data center in Richmond (VA). Access to the network is through Tymnet. Mainframes at the center consist of:

  - One IBM 370/155, 3 MB, OS (will be replaced by a 370/158 in July).

  - One IBM 370/158, 3 MB, OS (will be converted to MVS by late summer, 1980.)

  - Honeywell Page Printing System.

- In addition to providing on-line services for the APL Timesharing Division, the data center also handles the claims processing for Virginia, Delaware, North Carolina and West Virginia Medicaid contracts.

ASSESSMENT OF TCC

- TCC's major strength resides in its software for medical claims processing and its experience in this business. As such, TCC should be considered a serious acquisition candidate only if BCS is willing to make a commitment to obtain a leadership position as a processor of medical claims. The long-range objective of this strategy is to permit participation in the federal government's National Health Insurance program, once it passes Congress. (INPUT anticipates this is four to five years away.)

    - Acquiring TCC would provide BCS with the software, technical skills and marketing experience to participate in this market.

    - Reference should be made to INPUT's MAS Report, "Computer Services Markets in Government Funded Health Insurance," November 1979, for detailed forecasts and market opportunities in the health care field.

- TCC's timesharing services division has been moderately successful. INPUT's impression is that it has a few good products (AIRMARKET and the ENERGY data base in particular), but it has suffered from a lack of management attention and proper marketing.

    - Purchasing just the network services division may be an alternate strategy. Whether TCC would consider selling this portion of its business separately could not be determined.

INPL

COMPUTER DATA SYSTEMS

COMPUTER DATA SYSTEMS INC.
7315 Wisconsin Avenue
Bethesda, MD 20014
(301) 657-1730

Clifford M. Kendall, President
Public Corporation
Total Employees: 450
Revenues, Fiscal Year End
6/79: $8,694,000

COMPANY BACKGROUND

- Computer Data Systems Inc. (CDSI) was founded in 1968 to provide programming services. In 1969 the company went public, with stock trading on the OTC exchange. Clifford Kendall is the surviving member of the original four-man team who founded CDSI.

- For the first four years, CDSI was primarily engaged in providing programming services. About 1973, CDSI acquired the National Institute for Public Services, Inc. (NIPS), which published a credit union newsletter and Postal World.

  - NIPS was sold in 1978 for approximately $140,000 plus a commitment to pay CDSI 10% of NIPS's revenues for the next four years.

  - CDSI sold NIPS because it was diverting attention from data processing activities.

- In 1974, CDSI started to provide processing services by renting computer time from other companies. The company eventually established its own data center in 1977.

- In 1974, Electronic Composition, Inc. (formerly BNA Research, Inc.) was acquired. This acquisition formed the base of CDSI's photocomposition services.

- In 1976, CDSI acquired Forlines & Associates, a firm which specialized in financial and accounting support services. At the time of acquisition, Forlines had approximately $250,000 in sales.

- CDSI attempted to buy another photocomposition company in 1977 (Autocomp, Inc.) which eventually fell through.

- In 1978, CDSI merged the subsidiary operations of Forlines and Electronic Composition into the company.

- CDSI currently derives approximately 65% of its revenues from professional services and 35% from processing services.

INPUT

ORGANIZATIONAL STRUCTURE

- CDSI is organized into two major groups and six divisions.

    - Professional Services Group:

        . The Consulting/Systems Development Division provides clients with a wide variety of consulting, systems design and programming support. Programming services support inventory, personnel, statistical, financial, accounting, budgeting, health and resource management applications.

        . The Communications Systems Division provides communications services primarily for the U.S. Navy. Services include communications feasibility studies, requirements analysis, systems development, configuration management and operational site support for a range of automated communication systems.

    - Processing Services Group:

        . The Financial Services Group provides clients with a broad spectrum of accounting and financial system services. Services include general ledger, payroll, financial and management reporting, contract and project information reports and accounting, fee accounting systems, membership accounting and contract and grant management systems.

        . The Information Systems Division brings system design, system development, system maintenance and production processing services together in a total corporate service concept. Specialty processing areas include pension funds, membership accounting and inventory processing.

        . The Electronic Composition Division provides electronic photocomposition services through CDSI's proprietary electronic typography system (ETS).

        . The Data Services Division operates the CDSI data center and provides mailing, fulfillment, warehousing, inventory, messenger and delivery services.

COMPANY OFFICERS

- Clifford Kendall, President and Chairman: one of the four original founders of CDSI.

- Merle A. Coe, Vice President, Electronic Composition Division: accounting, EDP background.

- Gordon S. Glenn, Vice President Communications Division: graduated from University of Kentucky, ex-RCA programmer.

- George W. Leonard, Vice President, Consulting/Systems Development Division: ex-Computer Sciences Corporation employee.

- Daniel M. Grove, Vice President Information Services Division: ex-army, no degree. The man Kendall takes to "technical wars."

- Nello M. Lavorini, Vice President Financial Services: ex-Price Waterhouse, financial, marketing background.

- Carlton E. Coombs, Jr., Vice President: M.A. Architectural Engineering.

- Harold J. Johnson, Jr., Vice President/Secretary: IBM salesman for five years, came from Price Waterhouse. Responsible for CDSI's proprietary product, FARS.

- Wyatt D. Tinsley, Vice President/Treasurer.

- Thomas Green, Vice President: financial background, a new vice presidential position under Nello Lavorini, Financial Services.

FINANCIAL INFORMATION

- A complete financial report on CDSI is provided as a separate enclosure (Form 10K). In summary, the operating results of CDSI as of June 30, 1979 were:

    - From 1975 to 1979, revenues rose 230% from $3.8 million to $8.7 million while net income gained 67% from $298,700 or $0.57 a share to $500,000 or $0.91 a share. The 1979 pre-tax profit margin was 10.5% and the return on shareholder equity was 21%.

    - For the nine months ended March 31, 1980, CDSI's revenue was up 86% over the same period in 1979 ($10,538,100 versus $5,670,700). Net income increased 68% from $282,600 or $0.51 per share to $475,000 or $0.85 a share.

    - CDSI's FY 1980 revenues are expected to be over $14 million, an increase exceeding 60%.

- As of June 30, 1979, there were approximately 526,000 outstanding shares of CDSI common stock.

- A five-year financial summary follows:

CDSI
(FYE 6/30, $ Thousand)

	1979	1978	1977	1976	1975
Total Revenue	$ 8,694	$ 6,291	$ 5,760	$ 5,083	$ 3,779
. Percent increase from previous year	38%	9%	13%	35%	--
Income before taxes and extraordinary item	$ 916	$ 380	$ 245	$ 527	$ 486
. Percent increase (decrease) from previous year	141%	55%	(115%)	8%	--
Net Income	500	410(A)	154(A)	340	299(A)
. Percent increase (decrease) from previous year	22%	166%	(121%)	14%	--
Net income per share	$ 0.91	$ 0.74	$ 0.27	$ 0.62	$ 0.57
. Percent increase (decrease) from previous year	23%	174%	(130%)	9%	--

(A) Extraordinary item reported. Represents a tax benefit arising from the use of capital loss carry forward.

- CDSI's poor financial performance in 1977 was attributed to:

    - Start-up costs associated with a new computer center and the purchase of as IBM 370/135.

    - Development costs for expansion of electronic composition and financial services applications.

    - A problem contract.

    - Purchase of Forlines and Associates.

SOURCE OF REVENUE

- Financial information by business segment for years ended June 30, are summarized below:

	1979	1978
Revenue:		
Professional Services	$ 5,261,800	$3,745,900
Data Processing Support Services	4,690,800	2,941,300
Intersegment (Data Services Division)*	(1,258,800)	(395,800)
Total	$ 8,693,800	$6,291,400
Income from operations:		
Professional Services	$ 378,100	$ 218,700
Data Processing Support Services	478,800	137,300
Interest and other income	58,600	24,300
Total	$ 915,500	$ 380,300

* Intersegment revenues are deductible from Data Processing Support Ser-
  vices. As such, Data Processing Services revenues in 1979 were $3,432,000.

- The revenue distribution and contribution to profits for CDSI's professional and processing services are as follows:

FY 1979

Revenue Source	Percent of Total Revenue	Contribution to Profit
Professional Services	65%	44%
Data Processing Support Services	35%	56%

FY 1980 (ESTIMATE)

Revenue Source	Percent of Total Revenue	Contribution to Profit
Professional Services	60%	33%
Data Processing Support Services	40%	67%

- CDSI's profit from processing services has been running at 13.4% versus 6.5% from professional services.

- Substantially all of CDSI's professional services revenue and 28% of data processing support services revenue is derived from federal government agencies.

EMPLOYEES

- There are approximately 450 full-time CDSI employees and 80-90 part-time personnel. At least 50% of all full-time employees are exempt (primarily programmers).

- A major problem at CDSI is staffing. As of early May 1980, there were openings for 77 additional personnel, down from 100 openings a few months before.

KEY PRODUCTS AND SERVICES

- Processing Services/Financial Services Division:

  - All processing services offered by CDSI are currently in a batch mode. An RJE capability for its financial applications is currently in a testing mode, with plans to have it operational by the end of 1980.

    - The company is moving towards providing on-line services. Interactive capabilities are being considered but are at least three years from implementation.

  - CDSI's proprietary Financial Accounting and Reporting System (FARS) was developed for internal use nine or ten years ago. It has been available to clients since 1974.

    - The major strength of FARS appears to be its usefulness as a project control tool in addition to performing general accounting functions.

    - An overview of the FARS system is enclosed.

    - Pricing of FARS is on a transaction basis. CDSI reports it has very few small clients, with $500 per month being about the minimum monthly billing per client. Average client billings normally run $1,000-8,000 per month.

    - Major FARS clients are the Executive Office of the President and a large division of Booz-Allen.

- Processing Services/Electronic Composition Division:

  - CDSI's proprietary Electronic Typography System (ETS) was originally developed by Electronic Composition, Inc. Since the acquisition, CDSI has spent a considerable amount of time enhancing the product.

  - Billings for ETS were originally running about $20,000 per quarter. At the end of FY 1979, CDSI was averaging $70,000-80,000 per month. FY 1980 revenues are expected to be approximately $1 million.

- At the present time, CDSI reports that the profit from ETS has been marginal.

- Targeted market areas for ETS are with universities (bulletins and law school publications) and organizations which publish large quantities of technical manuals and other documents.

- Professional Services:

    - Virtually all of CDSI's professional services revenue ($5.3 million) is derived from federal government agencies. In FY 1979, two agencies (Department of the Navy and the Department of Energy) supplied 86% of all CDSI professional services revenues.

MARKET STRATEGIES

- At the present time, CDSI does not have a separate sales or marketing organization. The company's philosophy has been one of "the people who sell our services should also do the work - we want to make sure our services are not oversold, especially in programming." As such, most of CDSI's commercial sales have been by word of mouth or on a referral basis.

    - President Kendall admitted this approach is not going to work in the future. In the next year or so, CDSI plans to establish a separate organization to market actively its two proprietary products, FARS and ETS.

- CDSI's major competition in its professional services area comes from CSC, SDC and PRC. Competition with FARS comes from numerous local batch and timesharing companies. Competition for ETS is unknown.

OFFICE LOCATIONS

- All CDSI staff are located within the Bethesda/Washington, D.C. area. The company does not have any other branch or sales offices. Principal office locations are at:

    - 7315 Wisconsin Ave, Bethesda (Hdqrs.).

    - 7222 47th Street, Chevy Chase.

    - 7300 Pearl Street, Bethesda.

DATA CENTER

- CDSI's data center is located at its headquarters location. Equipment installed includes:

- One IBM 370/135 OS (some DOS is run for a few clients).

- One IBM 370/155, OS.

- Two IBM 4341s are on order. One will replace the 155, the other will be used for additional capacity.

ASSESSMENT OF CDSI

- CDSI should be regarded as an acquisition candidate only if BCS decides to expand its business into government contract work.

    - CDSI would provide the talent and resources to compete in this market.

    - It is an established firm with a good reputation in the Washington, D.C. area.

    - Management appears to be well qualified, especially in technical areas.

    - CDSI is profitable.

- CDSI's two major products, FARS and ETS, would provide additional capabilities to BCS's network services.

    - FARS' strength appears to be its usefulness as a project control tool in addition to general accounting.

    - ETS has excellent potential for use in publishing houses and within organizations. INPUT anticipates that photocomposition services will experience a high growth rate due to the expansion of word processing and text processing services.

CONSOLIDATED COMPUTER CORPORATION

CONSOLIDATED COMPUTER
  CORPORATION
1180 Avenue of the Americas
New York, NY 10036
(212) 575-8240

Robert McGill, President
Private Corporation
Employees: 90
Revenue, Fiscal Year End
  June 30, 1980: $2.8 million (est.)

COMPANY BACKGROUND

- Consolidated Computer Corporation (CCC) has been in business since 1965. The company originated through a facilities management contract with M. N. Landau Stores. The original founders were Messrs. McGill, Landau, Strum and Bloom.

- Approximately 93% of CCC's revenues are derived from batch processing services and 7% from systems and program development. Most of the systems development work is performed for existing clients.

COMPANY OFFICERS

- An organization chart of CCC's executive staff is presented in Exhibit A.

FINANCIAL INFORMATION

- CCC's FY 1980 revenues (6/30) are expected to be $2.8 million, an 8% increase over FY 1979 revenues of $2.6 million.

  - Pre-tax profits for FY 1980 will be about $250,000, or 9%.

  - The company claims it has consistently been profitable and has no outstanding debt.

- Twenty-five percent of CCC's stock is held by President McGill. The remaining 75% is held by the widows of M. Landau and I. Strum, and by A. Bloom, one of the original founders. (Bloom is not active in the management or operation of CCC.)
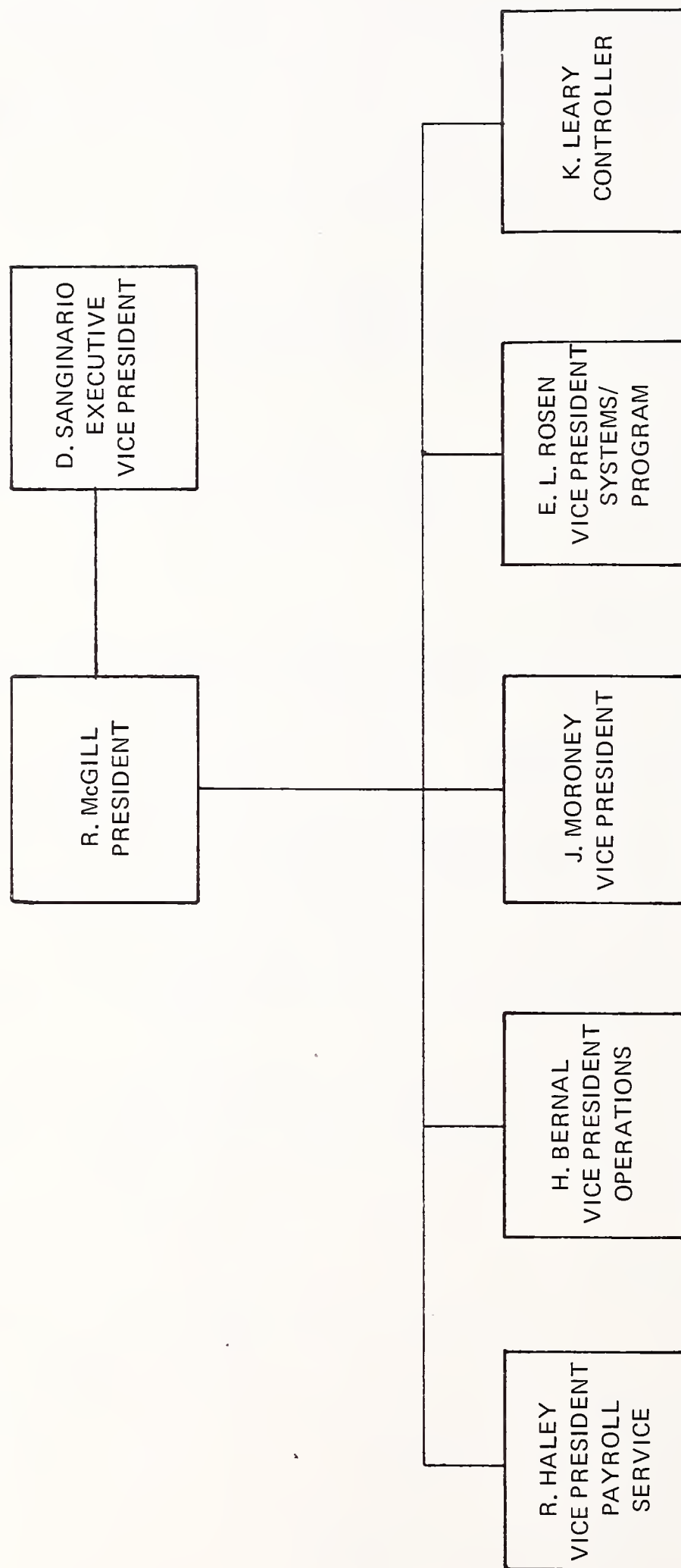
SOURCE OF REVENUE

- An approximate distribution of CCC's sources of revenue follows:

Four large retail accounts	$1,000,000
Payroll processing	800,000
Bulk computer time sales	250,000
Program development	200,000
Processing for "cut and sew"	200,000
Miscellaneous processing, data entry services	350,000
	$2,800,000

INPUT

EXHIBIT A

CONSOLIDATED COMPUTER CORPORATION

```
                                    ┌─────────────────────┐
                                    │   D. SANGINARIO     │
                                    │   EXECUTIVE         │
                                    │   VICE PRESIDENT    │
                                    └──────────┬──────────┘
                                               │
                        ┌──────────────────────┴───┐
                        │   R. McGILL              │
                        │   PRESIDENT              │
                        └──────────┬───────────────┘
                                   │
    ┌─────────────┬────────────────┼────────────────┬─────────────────┐
    │             │                │                │                 │
┌───┴────────┐ ┌──┴─────────┐ ┌────┴────────┐ ┌─────┴────────┐ ┌──────┴──────┐
│ R. HALEY   │ │ H. BERNAL  │ │ J. MORONEY  │ │ E. L. ROSEN  │ │ K. LEARY    │
│ VICE       │ │ VICE       │ │ VICE        │ │ VICE         │ │ CONTROLLER  │
│ PRESIDENT  │ │ PRESIDENT  │ │ PRESIDENT   │ │ PRESIDENT    │ │             │
│ PAYROLL    │ │ OPERATIONS │ │             │ │ SYSTEMS/     │ │             │
│ SERVICE    │ │            │ │             │ │ PROGRAM      │ │             │
└────────────┘ └────────────┘ └─────────────┘ └──────────────┘ └─────────────┘
```

KEY PRODUCTS AND SERVICES

- CCC specializes in inventory control applications for retailers, payroll services and accounts payable ("retail payables").

- Major services offered by the company are:

    - Facilities management.

    - Systems and program development.

    - Batch accounting systems including accounts payable, general ledger, profit and loss reporting, and accounts receivable.

    - Manufacturing and material control/systems.

    - Merchandise and inventory information systems.

    - Payroll processing.

    - Pension payment systems.

    - Optical scanning.

    - Charitable institution systems.

- All software has been written by the company with the exception of payroll. CCC uses the Pay I and Pay II packages from Wang (PHI) Computer Services, Inc.

MARKET STRATEGIES

- CCC does not have a separate marketing organization. All sales have been on a referral basis.

- CCC does not advertise its services nor does it publish any marketing brochures.

- In spite of the company's low profile, it has developed a solid, steady business base. Customers tend to stay with CCC, several have been clients for 10-15 years.

OFFICE LOCATIONS

- CCC does not have any additional offices other than its headquarters. All clients are located in the vicinity of the New York metropolitan area.

DATA CENTER

- ÇCC maintains one data center at its headquarters location. Although CCC told INPUT a few years ago that it planned to implement a remote computing capability, this was never done. (CCC stated this is still under investigation.)

- All processing is batch. CCC does have an IBM 4300 on order; however, it will be used exclusively by one client as a communications/input device.

- Equipment located at the data center consists of:

  - Three IBM 360/40s (128K, 256K, 448K).

  - Two Optical Readers.

  - One Entrex 480 Key-to-dial system with 15 keystations.

ASSESSMENT OF CONSOLIDATED COMPUTER

- Although CCC would provide BCS with a steady source of revenue and reasonable pre-tax profits, INPUT does not believe it would be an attractive company to acquire for the following reasons:

  - Absence of any unique products.

  - Lack of management as far as growth, marketing and new product development is concerned.

  - Batch payroll and retail processing are not high growth areas.

CYBERTEK COMPUTER PRODUCTS

CYBERTEK COMPUTER
  PRODUCTS, INC.
6133 Bristol Parkway
Culver City, CA 90230
(213) 649-2450

Vaughn W. Morgan, President
Private Corporation
Employees: 179
Total Revenues, Fiscal Year End
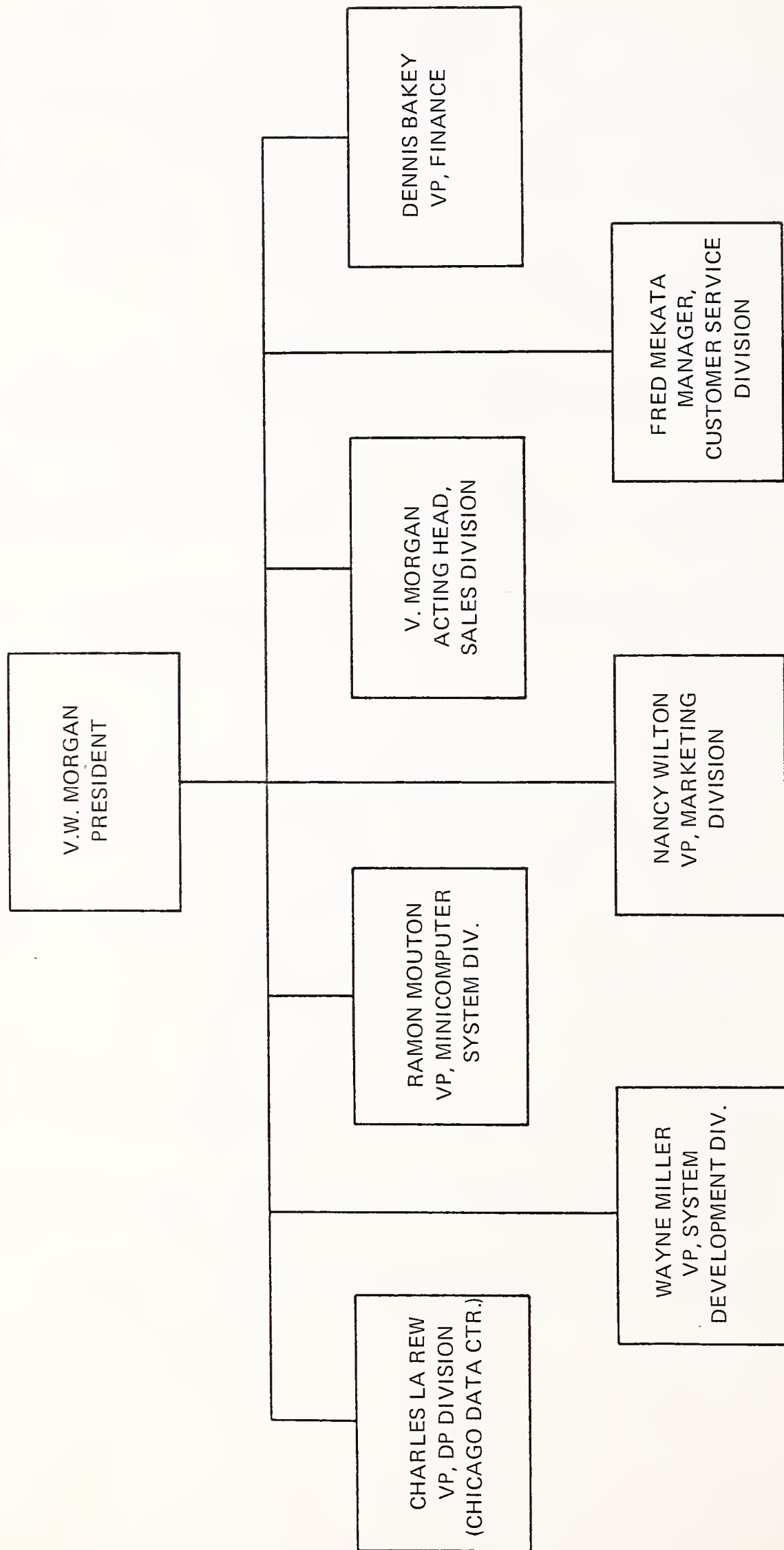   3/31/80: $7,900,000

COMPANY BACKGROUND

- Cybertek was formed in 1969 by two ex-IBM employees, Vaughn Morgan and Nancy Wilton, to specialize in providing products and services to the life insurance industry. Insurance services are still the company's primary market.

- In its early years, the company only developed and sold software products. In 1974, a data center was opened in Chicago to provide processing services. Minicomputer products were added in 1978.

- A subsidiary operation, Cybertek Management Services, was formed by Cybertek in late 1978 to provide EDP personnel recruiting services.

ORGANIZATIONAL STRUCTURE

- Cybertek is organized into six operating divisions.

    - Data Processing Division: manages and operates the Cybertek data center in Chicago.

    - System Development Division: a product development organization.

    - Minicomputer Systems Division: development of all minicomputer products.

    - Marketing Division: internal market research and product planning.

    - Customer Service Division: maintenance and installation of all Cybertek products.

    - Sales Division: responsible for all sales of Cybertek's products and services.

- An organization chart is presented in Exhibit A.

INPUT

EXHIBIT A

```
                          V.W. MORGAN
                           PRESIDENT
```

- CHARLES LA REW
  VP, DP DIVISION
  (CHICAGO DATA CTR.)

- RAMON MOUTON
  VP, MINICOMPUTER
  SYSTEM DIV.

- V. MORGAN
  ACTING HEAD,
  SALES DIVISION

- DENNIS BAKEY
  VP, FINANCE

- WAYNE MILLER
  VP, SYSTEM
  DEVELOPMENT DIV.

- NANCY WILTON
  VP, MARKETING
  DIVISION

- FRED MEKATA
  MANAGER,
  CUSTOMER SERVICE
  DIVISION

INPU

FINANCIAL INFORMATION

● Cybertek reported revenues of $7.9 million in FY 1980, a 34% increase over FY 1979 revenues of $5.9 million. The company stated its pretax profit margins have been averaging 15-18% for the past several years.

● Approximate gross revenues for the last five years follows:

CYBERTEK
FIVE-YEAR FINANCIAL SUMMARY
($ MILLION)

	3/80	3/79	3/78	3/77	3/76
Total Revenue	$7.9	$5.9	$5.2	$4.0	$3.1
. Percent increase from previous year	34%	13%	30%	29%	--

  - In 1979, Cybertek changed its fiscal year end from December 31 to March 31. All of the above figures have been adjusted accordingly.

● INPUT received a nebulous response to the question of company ownership. It can be assumed, however, that the majority of stock is held by the two founders, with other company officers holding minority interests.

SOURCE OF REVENUE

● An approximate distribution of Cybertek's FY 1980 revenue follows:

	Total Revenue	% of Total
Software sales	$3.1	39%
Processing	2.1	27
Minicomputer sales	1.2	15
Software development	0.8	10
Personnel recruiting	0.6	8
Education/training	0.1	1
	$7.9 million	100%

EMPLOYEES

● The 179 Cybertek employees are located as follows:

Los Angeles	81
Chicago	70
Dallas	26
Boston	2
	179

● Cybertek has eight sales personnel, located in Los Angeles, Chicago and Boston.

KEY PRODUCTS AND SERVICES

● Cybertek has been marketing two minicomputer systems since 1978. Both systems are designed to be marketed to insurance companies, although they could be adapted to cross-industry use.

- Information Manager is designed for medium to large insurance companies and can be used in a standalone or distributed processing environment.

    . Applications and capabilities include:

        - Word processing.

        - Electronic mail.

        - Alpha File Retrieval System.

        - Automated Calendar.

        - Direct inquiry into mainframe data base.

        - HASP/RJE work station.

        - 3270 and 2260 emulations.

        - BASIC, FORTRAN, COBOL and Common Assembly Language (CAL).

    . A Perkin Elmer 32-bit computer is used as the central processing unit. Price of Information Manager with 18 terminals is about $150,000. Approximately 14-15 systems have been sold since it was introduced in 1978.

- Agency Information Manager (AIM) is specifically designed for small insurance agents and operates as a standalone system.

    . Applications available include:

INPU

- Word processing

- Client information system.

- Proposal system.

- General ledger and management reporting system.

  - The AIM central processor is a Perkin Elmer 16-bit machine with 64K byte memory. Price of a small system is about $65,000.

  - Cybertek began marketing the product in December 1978 and has installed six systems.

- Software product sales continue to contribute the majority of Cybertek's revenues although they are declining in proportion to the total (39% in FY 1980 versus 50% in FY 1978) as other services are introduced.

  - All software products have been developed by the company.

- Cybertek's software is operational on any IBM or IBM-compatible system, under any type of operating system or access method.

  - Cross-industry products:

    - Cyberscribe II: correspondence management system.

    - Cybergram: electronic mail.

    - Cybercom I: polling list teleprocessing monitor for small- and medium-sized systems.

    - Cybercom II: CICS replacement for medium to large users.

    - Alpha Index System: a centralized cross reference data base.

    - Application Executive: acts as an interface between a teleprocessing monitor and user application subsystems.

  - Life Insurance Products (marketed under CYPROS^{tm}).

    - Policy Exhibit: produces management reports, financial tables and statements.

    - Valuation: produces interim and annual statutory statements.

    - Agents On-Line Processing System: creates, maintains and displays information in an insurance agent's data base.

- Commission Accounting System: a comprehensive agent's commission and financial control system.

- Policy Summary & Illustration System: an on-line policy proposal system for all individual insurance products.

- Management Reporting System: general ledger, budgeting and financial reporting.

- AUTO/ISSUE: an on-line policy issue system for Ordinary Life, Individual A & H and Deferred Annuities.

- Billing & Re-entry System: an individual policy billing system.

- Agents Licensing: on-line system which monitors the agents licensing process from license application through issue and subsequent renewal.

- Flexible Premium Annuity System: interactive processing for issue and maintenance of flexible premium annuities.

- On-Line Policy Administration: provides inquiry and on-line file maintenance of an in-force policy file.

- Facilities management services are available from a data center in Chicago. The data center does not offer conventional timesharing services. Processing is performed on a contracted basis.

  - Network capabilities are limited to leased and dial-up lines.

  - Approximately 250 terminals are connected to the center. The largest clients are the Kemper Life Insurance Company and Republic Vanguard.

- A new product is under development for large life insurance companies, called the I-System. Development is being sponsored by ten large life insurance companies.

  - The system is being billed as a productivity-oriented operating environment with the objective of automating most of the batch processing operations of an insurance company. Plans are to interleave on-line transactions with batch processing to optimize the system's use and to reduce second and third shift operations.

  - Some of Cybertek's applications software will be incorporated into the system.

  - Development of the I-System should be completed by late 1981.

INP

MARKET STRATEGIES

- Cybertek's market strategy has been to develop a complete line of services for all sizes of life insurance companies and insurance agents and brokers. This has been accomplished through:

  - Facilities management services for large and small insurance companies.

  - Software products for medium- to large-scale, in-house users.

  - Minicomputers products for small- and medium-sized organizations.

- The only deficiency in Cybertek's coverage of the insurance industry is the small, one- to five-person insurance agents organizations.

- Marketing is handled by a team effort between the sales staff and product line managers (technical experts).

OFFICE LOCATIONS

- Branch office locations were established as follows:

  - Chicago, 1974.

  - Boston, 1976/77.

  - Dallas, 1979.

DATA CENTER

- Cybertek's data center in Chicago has an IBM 360/05 OS MVT and a National Semiconductor AS 3-5 MOD IV MVS. Clients access the center through leased or dial-up lines.

ASSESSMENT OF CYBERTEK

- Cybertek is a well-established firm in the insurance industry. It appears to have a good management team and an excellent technical staff skilled in areas of software and system integration.

- INPUT highly recommends Cybertek on the basis that its software and minicomputer products represent an excellent opportunity for offering distributed data processing using turnkey microcomputer/minicomputer systems.

  - In a recent INPUT Market Analysis Report, minicomputer products (especially those offered with a distributed processing capability) were

reported to have the highest growth potential within insurance companies and for insurance agencies and brokers.

- Cybertek has the product and experience base to be a viable supplier of services to this market.

- Use of the BCS network to interconnect agents and brokers to home offices would provide additional market opportunities.

- Cybertek has a good reputation in the insurance industry and is well known.

• INPUT would not recommend buying Cybertek solely for the purpose of acquiring products for the BCS network. Insurance products on an RCS network have a low market potential.

DISTRIBUTION SCIENCES

DISTRIBUTION SCIENCES, INC.
4333 Transworld Road
Schiller Park, IL 60176
(312) 671-2530

Thomas Hodgkins, President
Privately Held Company
Total Employees: 115
Total Revenues, Fiscal Year End
6/30/78: $4 million (est.)

COMPANY BACKGROUND

- Distribution Sciences, Inc. (DSI) was founded in 1968 to provide automated freight-rating services and the publication of tariff information on microfilm. In 1972, Thomas Hodgkins and David Grumhause assumed control of the company from Arcada, Inc. Management will not release details or summary financial information in any form. However, in addition to estimating the revenue levels stated above, INPUT estimates that DSI's pretax profit margins are in excess of 20%. Total employees increased from 90 to 115 during the course of the last year.

- DSI is not heavily involved in marketing its services in that it does not have a formal marketing force. The Principals of the company do the majority of the marketing, with the exception of a marketing representative who has an office in Connecticut and represents DSI in the Northeast. Much of its marketing is a consulting-type marketing and the principals of DSI seem to believe that this marketing approach is appropriate and will continue.

- DSI has recently begun to offer and advertise certain data base services based on selling formatted information that is contained in its overall data base. This represents the first advertising campaign initiated by DSI. In addition, DSI has recently hired an ex-NCSS marketing person to begin marketing the minicomputer-based DSI product line.

- The only other computer service company which represents direct competition to DSI is Numerax, located in northern New Jersey. While Numerax tends to orient itself more towards the smaller shippers, it does compete directly with DSI. However, the President of DSI stresses that the main competition to the expansion of DSI services is inertia on the part of the various traffic departments within potential client companies.

- Distribution Sciences is moving to a new location around September 1, 1980. At that time, its new address will be 1350 Touhy, Des Plaines, IL 60018.
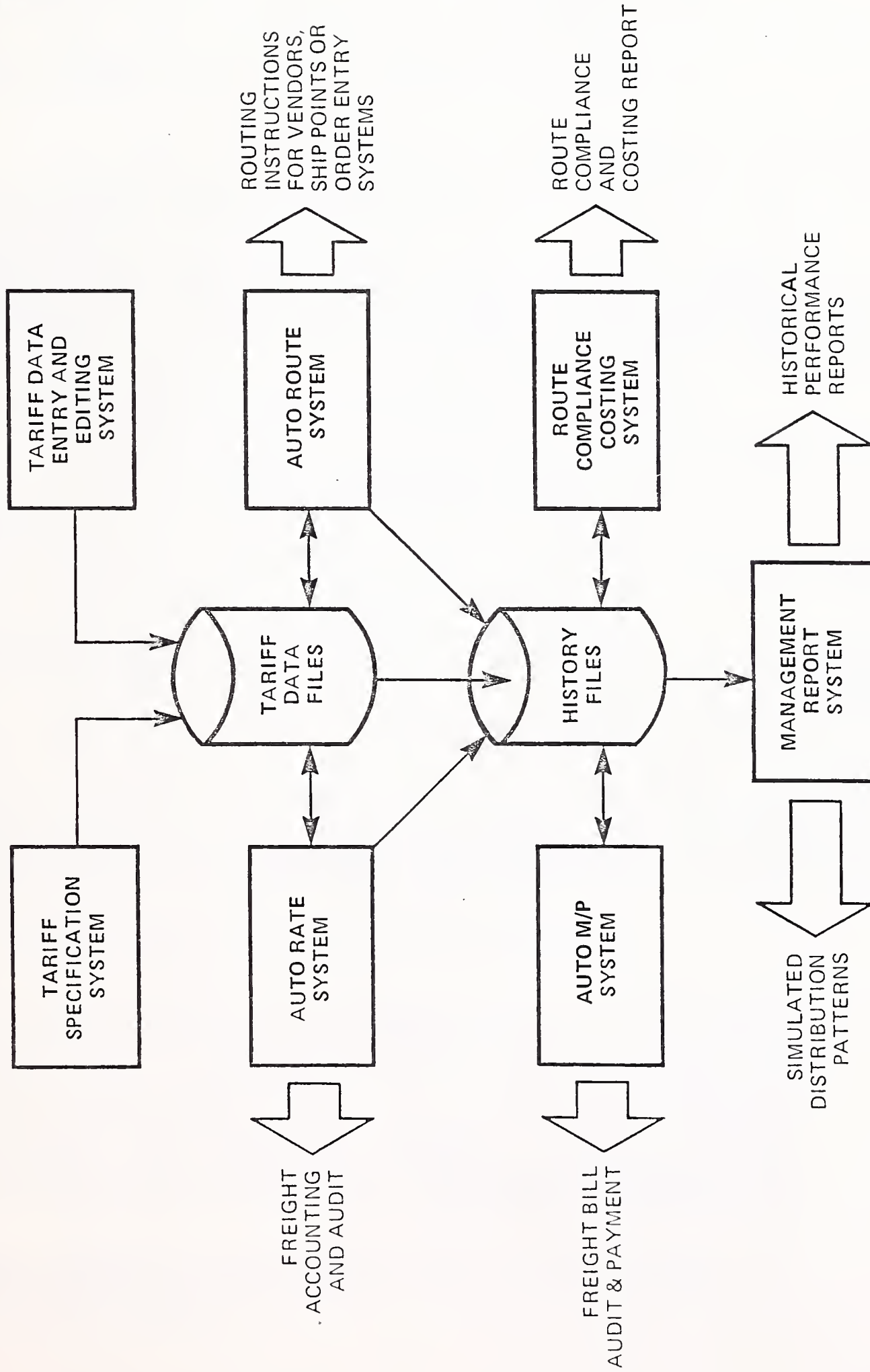
KEY PRODUCTS AND SERVICES

- DSI's initial product (and, until recently, its only product) has been the sale of remote batch services to the traffic departments of commercial companies. At the present time, DSI has 40 clients, all of whom are large corporations

with annual freight bills in excess of $5-10 million. The primary purpose of the DSI service is to enable its clients' traffic departments to reduce the cost of DSI's physical distribution function.

- The company maintains a data base of information on freight tariffs for a variety of common carriers. Although users access the DSI data base on an inquiry basis, DSI maintains total control of the data base. At this time, all data communications between DSI and its clients are on a remote batch basis with tape-to-tape or computer-to-tape data transfer.

- DSI will also sell its software for in-house installation. If a customer buys the DSI software for use within its own facility, DSI will continue to maintain the software as well as the data base.

- In order for DSI to serve a client properly, the client company must have a centralized shipping department. This is necessary, as DSI accepts only input which is in machine-readable form. Therefore, the client company must convert data to machine-readable form in a centralized location. This compares with Numerax, which will accept manual input from divisionalized or decentralized organizations. DSI enjoys an advantage over Numerax in that its services are less labor-intensive.

- The basis for all DSI services is its Tariff Data Bank containing all the freight rating schedules employed by carriers used by DSI clients. Add-on services are the AUTO RATE** System, the AUTO ROUTE** System, the MATCH/PAY System, and the Management Report System. The relationship between the services is shown in Exhibit I.

- The Tariff Data Bank is a collection of information about tariff rates and regulations. It can provide tariff information for rail, tank car, commodity truck, local drayage, air freight, air and freight forwarder, shippers' associations, all small package modes, and TOFC (trailer on flat car). Management states that its current data base contains sufficient tariff data to price between 70% and 80% of all U.S. motor common carrier shipments. The data base includes:

    - Cross-reference files which translate client codes for geographic locations, products and carriers (routes) into DSI standard codes.

    - Rate base/mileage/basing files which contain the geographic data required to determine all distance and distance equivalents used in the various tariffs.

    - Class rate and column rate files.

    - Special rate and charge files which include all varieties of commodity rate items in addition to those contained in client contracts and individual publications.

    - Carrier participation/tariff authority files.

** Registered Trademark

- 38 -

INPU

EXHIBIT 1

DISTRIBUTION MANAGEMENT INFORMATION SYSTEMS

TARIFF DATA ENTRY AND EDITING SYSTEM

TARIFF SPECIFICATION SYSTEM

AUTO ROUTE SYSTEM

ROUTING INSTRUCTIONS FOR VENDORS, SHIP POINTS OR ORDER ENTRY SYSTEMS

ROUTE COMPLIANCE COSTING SYSTEM

ROUTE COMPLIANCE AND COSTING REPORT

TARIFF DATA FILES

HISTORY FILES

AUTO RATE SYSTEM

FREIGHT ACCOUNTING AND AUDIT

AUTO M/P SYSTEM

FREIGHT BILL AUDIT & PAYMENT

MANAGEMENT REPORT SYSTEM

HISTORICAL PERFORMANCE REPORTS

SIMULATED DISTRIBUTION PATTERNS

INPUT

- Governing publication and tariff linkage files.

- Rules files which contain regulations pertaining to application of tariffs and their rates.

- Rules files which contain regulations pertaining to the application of special (accessorial) charges.

- Product classification/exception files.

- The AUTO RATE** System determines the freight charges for each shipment for each client. The information is generated from the Tariff Data Bank and the client's bills of lading for each shipment. AUTO RATE** data are normally transmitted from the client to DSI and back via computer tape; in some cases, DSI will provide key-to-tape data entry services for clients unable to provide bills of lading on tape.

    - The basic data required for the AUTO RATE** System, in addition to that already contained in the Tariff Data Bank, are:

        . Origin and destination of shipment.

        . Weight and description of commodity items being shipped.

        . Routing and carrier name(s).

        . Special conditions affecting rate or charge (protective service, stop-off, etc.)

        . Shipment date.

    - AUTO RATE** produces two types of information:

        . Data on shipment costs which are used for freight payment, freight bill audits, and invoicing.

        . History files for each shipment for which historical management information and reports can be produced.

- AUTO ROUTE**, a second product which accesses the Tariff Data Bank, automatically determines the most cost-effective route for shipping freight. The company indicated plans to offer this service on an interactive remote computing basis early in 1979. This is accomplished by automatically comparing all possible routes and the cost of each, then selecting the optimum one for the shipment in question. Alternative routes are selected based on shipment weight, shipment origin and destination, products shipped and potential carriers for various modes.

    - AUTO ROUTE** can also evaluate routes for multiple origins, mixes of products, product density and cube, combinations of destinations (for

** Registered Trademark

INPU

consolidations), various carriers, and equipment types and sizes for each carrier.

- When used in conjunction with AUTO RATE**, AUTO ROUTE** will audit and measure deviations from the suggested, most cost-effective routes.

- DSI management claims that no other company offers a service comparable to the AUTO ROUTE** System and that client savings from the use of AUTO ROUTE** far exceed the savings achieved from freight bill audits derived from AUTO ROUTE**.

• The AUTO M/P System is an add-on to the AUTO RATE** System. It matches the charges on freight bills with the AUTO RATE-calculated charges for each shipment. MATCH/PAY produces a variety of standard and custom reports. The company began to offer this service on DSI-supplied, preprogrammed minicomputers in late 1979. The standard reports include:

- Match summary report - a summary statement for matches indicating overcharges, undercharges and incomplete transactions (where either the freight bill or the bill of lading is missing).

- Accounts payable record - client-specified parameters for handling accounts payable situations where the carrier's freight bill and the AUTO RATE** estimate charge do not match.

- Mismatch transaction printout - a DSI computer-generated listing of processed transactions where charges and estimated costs or weights are disparate. Again, the client may specify total listing or listing of only those transactions not falling within specified parameters.

• The Management Report System is a freight cost control, accounting and reporting system which produces tailored reports using information contained in both history files generated by AUTO RATE** and AUTO ROUTE** and data contained in the Tariff Data Bank. The reports, studies and potential benefits available through the system include:

- Detailed allocation of freight costs.

- Identification of freight penalties.

- Improper commodity lists.

- Elimination of accounting accruals.

- Increased control resulting from an automated system.

- Warehouse location simulation and selection.

- Pool location.

** Registered Trademark

- Simulation studies are also available through the DSI system, aiding in making cost effective management decisions. Examples of simulations performed for specific clients include:

  - Streamlining shipment schedules and distribution points.

  - Determining optimal warehouse and pool locations.

  - Evaluating alternative methods.

  - Evaluating and selecting optimal procedures for locating required inventory items at secondary warehouses.

INDUSTRY MARKETS   DSI revenues are primarily derived from the manufacturing industries, as shown below:

Manufacturing	85%
Process: Chemical	
Food, drugs, etc.	
Discrete: Automotive, other	
Distribution	15
Retail	
Total	100%

COMPUTER HARDWARE

- DSI utilizes an IBM System 370/Model 168, which is owned by Union Oil Products. DSI utilizes about one-third of this machine and pays Union Oil on a contractual basis for its use of the hardware. In addition, DSI owns certain disks which form part of the 370/168 configuration.

- As mentioned earlier, all input data and output data are tape-to-tape, computer-to-tape, or tape-to-computer. That is, there are no on-line communications between the DSI customers and the 370/168.

- All data communications are over dial-up communication lines.

- The DSI minicomputer configuration consists of either a DEC 1103 or a DEC 1123, for larger clients. A typical 1123 configuration consists of three or four CRTs, four disks and a line printer. The 1103 configuration typically consists of two CRTs, two to four disks and a line printer. DSI sells the hardware for $20,000-40,000, or leases the hardware through a third-party leasing company.

ASSESSMENT OF DSI

- INPUT considers DSI a prime candidate for acquisition by Boeing, for the following reasons:

- Its data base can be installed in the BCS timesharing hardware and, given the extent of the BCS network, can be utilized for a significant increase in revenue and profit generation. DSI has not been aggressive in promoting this service to date.

- The basic AUTO RATE** services are ideal for a timesharing network application. DSI does not have communications technology in-house and seems to be reluctant to provide AUTO RATE** services on an on-line basis due to concerns about the technology and the cost of the communications aspect of the services. Certainly, BCS should have no such similar concerns.

- DSI has made a good start towards providing its services on a standalone minicomputer basis. Standalone minis linked into the DSI data base through the BCS network could provide an outstanding level of service to both large- and medium-sized shippers. DSI is a long way from providing this service, yet BCS could cause it to happen very rapidly.

- DSI has a fine reputation within the industry as consultants and problem solvers. This reputation, together with the BCS structure and capabilities, could result in an extremely attractive offering within the distribution marketplace.

- Non-DSI industry sources indicate that approximately $200 billion are spent each year on transporting goods from manufacturers to the final consumer. These sources also indicate that approximately 10% of this $200 billion could be saved through the use of more efficient traffic procedures. Thus, this is an extremely large marketplace which is currently serviced by only two companies, in addition to a number of banks which provide relatively poor data processing services in this area.

** Registered Trademark

FINANCIAL TECHNOLOGY

FINANCIAL TECHNOLOGY, INC.
612 North Michigan Avenue
Chicago, IL 60611
(312) 280-0600

Gerald Frankoviac, President
Private Corporation
Employees: 65 (est.)
Total Revenues, Fiscal Year 1979:
  $3.5 million (est.)
Computer Services Revenues:
  $2 million (est.)

COMPANY BACKGROUND

- Financial Technology, Inc. was founded in Chicago in 1969 by several Chicago banks as a cooperative to provide data processing services to the owner banks. FTI operated solely in this capacity until some time in the mid-1970s, when it expanded to include processing services for non-owner banks as well as owner banks. In addition, FTI also began to sell its software to other banks throughout the U.S.

FINANCIAL INFORMATION

- FTI's growth rate for the first 5-6 years of its existence was exceedingly modest. In the last three or four years, FTI has grown in revenues, but the majority of this revenue growth has come from the sale of software as opposed to the sale of services on a transaction basis. The five-year financial summary is as follows:

FTI
FIVE-YEAR FINANCIAL SUMMARY
($ Million - numbers are estimates)

	1979	1978	1977	1976	1975
Revenue	$ 3.5	$ 3.2	$ 2.8	$ 2.5	$ 2.4
. Pretax profits	12%	12%	10%	8%	8%

ORGANIZATIONAL STRUCTURE AND PRODUCTS

- FTI is organized into two separate operating divisions.

I.   COMPUTER SERVICES DIVISION

- This division services approximately 12-15 small- to medium-sized banks in the Chicago area. Approximately half of these banks were the original founding owners of FTI. FTI supplies a full set of services to these banks based on the use of FTI's General Ledger and Information System. This is the same system

which it markets to other banks throughout the country, from the point of view of selling its software outright to these banks. FTI uses an IBM 370 configuration and supports a variety of teller terminals in its customer bank locations.

- FTI has a good reputation for service within its Chicago marketplace; however, it has not been able to expand its customer base significantly over the four to five years it has been in business servicing non-owner banks.

- The FTI software package is complete and reliable and probably ranks among the best bank service software packages operating in its marketplace. FTI's relatively moderate growth in the services business is probably due more to its lack of professional marketing than to any lack of software capability or to poor service levels.

2.   SOFTWARE DIVISION

- This division is responsible for marketing its software on a "for-sale" or "for-lease" basis to commercial banks throughout the country. This division of FTI was the original division and was in existence prior to the formation of the Services Division. In this respect, FTI parallels Weiland Computer Company, which was also established to develop software for owner banks and then subsequently went into the services business. While FTI claims that it has sold its software to 200 banks throughout the U.S., in actuality, various pieces of its software were sold to that number of banks. Few, if any, banks use all of the FTI software. It is INPUT's opinion that FTI has been overshadowed in its software sales activities by firms such as Kranzely and Florida Software.

ASSESSMENT OF FTI

- It is INPUT's opinion that FTI is not an outstanding acquisition candidate for BCS. The president, Gerry Frankoviac, has not in the past exhibited any particularly strong management capabilities. He is fully capable of running a $2-3 million business, but INPUT seriously questions his ability to run a multilocation computer service business or a business which is dynamic and growing very rapidly. Frankoviac is a good, but limited, marketing-oriented individual. Furthermore, Frankoviac is a reasonably good manager, but with very apparent limitations as far as growth possibilities are concerned.

- Each of the operating divisions has a Manager, but these individuals are primarily technical managers and do not manage a bottom-line business. Therefore, INPUT does not see any depth of business management capabilities within FTI. This is not unusual in a company of this size, in that most are typically dependent on one person as the entrepreneur/businessman.

- INPUT does know from previous experiences that FTI is willing to discuss acquisitions. Initiating such discussions would not be difficult. The contact person within FTI for such discussions would be Gerry Frankoviac. It is worth noting that, after initially scheduling an interview with the INPUT consultant,

Frankoviac subsequently cancelled the interview as he did not feel that it was beneficial to him or to his company to release any data about FTI to INPUT. Therefore, all of the information represented in this report has to be treated as general approximations based on INPUT's knowledge of FTI over the course of the last few years. INPUT does believe, however, that the information presented above is reasonably accurate and can be used for planning purposes by BCS.

MCSWEENEY AND ASSOCIATES

McSWEENEY & ASSOCIATES
1550 North Bristol
Newport Beach, CA 92660
(714) 833-9721

Stephen Rimel, President
Partnership
Employees: 25
Total Revenue: $1.5 Million
   (estimate)

COMPANY BACKGROUND

- McSweeney & Associates was formed in July 1973 by Dan McSweeney, a former executive of a large savings and loan institution. The original direction of the company was to provide management consulting to savings and loans. The company has since broadened its consulting to encompass all types of financial institutions and real estate companies.

- In 1973/74, McSweeney developed a financial model for use by the savings and loan and mutual savings bank industries. The model is currently available on GE's network.

- In addition to consulting services, McSweeney has an executive search division, called MCS. MCS specializes in recruiting financial executives for banking institutions and industrial corporations.

- Dan McSweeney left the company in mid-1978 to take a senior position with a San Diego savings and loan institution. The company is currently owned by five partners.

FINANCIAL INFORMATION

- All attempts to obtain financial information were declined. INPUT estimates McSweeney's revenues at about $1.5 million.

- Approximately 80-85% of McSweeney's revenues come from consulting and related services to the savings and loan industry.

- The remaining 15-20% of its revenues are derived from consulting services to commercial banks and real estate companies.

COMPANY OFFICERS

- The five partners of McSweeney are:

  - Stephen Rimel, President.

  - Peter Oeth, Vice President.

  - Norman Katz.

- Thomas Greeley.

- Robert Haberfeld.

- Warren Halperin is the managing director of the MCS Division.

- All stock is owned by the five partners.

EMPLOYEES

- Out of the 25 current McSweeney employees, approximately 15-17 work as consultants, including company officers.

    - An additional three people are devoted full-time to the recruitment activity.

    - The remainder are administrative and clerical personnel.

- All employees are located at the headquarters location. There are no other offices.

- The average employee age is about 35.

- Consultants at McSweeney typically are not hired from thrift institutions. They generally come from:

    - Other management consulting firms.

    - Financial analysts who have experience in consulting to financial institutions.

    - Planning personnel from other industry sectors.

KEY PRODUCTS AND SERVICES

- The only product McSweeney offers is its Profit Planning Model, an interactive financial forecasting, budgeting and planning tool. It is designed specifically for the savings and loan and mutual savings bank industries.

    - The Model produces a series of financial and statistical reports based on beginning balances from a client's statement of condition and management's month-by-month projections.

        - Reports include detailed financial statements with a cash flow report and an analysis of rates, yields, ratios, expenses and variances from budget.

- 50 -

- The Model also allows management a systematic means to monitor results and analyze plans and alternative courses of action.

- The Model has been offered on GE's network since 1974, on a non-exclusive license basis. As such, McSweeney has received very little marketing support from GE. (There are only 35 or so institutions using the Model.)

  - Last year McSweeney hired a person to interface with GE and expand marketing efforts on the Model. The objective is to add an additional 15 clients this year.

- INPUT estimates that McSweeney's revenue from the Model is less than $200,000 a year.

- Clients range in size from institutions with $50,000 in assets to $3.5 billion in assets.

- McSweeney stated that the Model cost about $250,000-350,000 to build and that another $200,000 has been invested in enhancements and maintenance. (All maintenance is performed by an outside contractor.)

- The only known RCS vendor which has a competitive product is Remote Computing Corporation. Saddlebrook Corporation in Cambridge is believed to have installed a comparable product on a minicomputer.

- In comparison, McSweeney views its Model to be easier to use, more powerful and less expensive than those offered by competitors.

- The Model has never been sold to in-house users.

- The primary business of McSweeney is the provision of management consulting services to financial institutions and real estate companies.

  - McSweeney's consulting expertise is in:

    - Strategic financial and operational planning.

    - Organizational planning and design.

    - Compensation reviews.

    - Expense control and productivity improvement.

    - Management by objectives.

    - Employee training and development.

    - Long-range planning.

- 51 -

- Mortgage and consumer lending.

- NOW/EFTS Research and new product development.

- Branch planning and site selection.

- Management information systems and EDP.

- The majority of McSweeney's consulting revenues (80-85%) comes from thrift institutions and is heavily oriented towards strategic and financial planning.

- In addition to consulting, McSweeney also performs market research studies. One example is a national survey on automation in the thrift industry to be completed this fall.

- The company prides itself on the quality of its consulting work and stated that any previous client can be used as a reference, including one client where litigation occurred between the two.

MARKET STRATEGIES

- McSweeney's primary objective is to expand its consulting business and grow the company at a controlled rate.

- The expansion of consulting activities is targeted at:

  - Commercial banks.

  - Real estate developers.

  - Mortgage companies.

- Consulting in EDP-related areas is expected from:

  - Banking institutions moving to on-line applications.

  - Strategic planning and technical evaluations in the area of EFTS.

  - Real estate lending applications.

- McSweeney did not indicate that any plans were in place to develop additional products or services that are computer-related. Future growth will come from its consulting business.

ASSESSMENT OF McSWEENEY

- McSweeney's strength lies in its management consulting base. Although the company's concentration and experience in the thrift industry might complement BCS's Financial Services Division, INPUT does not recommend acquisition.

    - If BCS wanted to enter the market of providing general consulting to the thrift industry, it could probably do so by selecting personnel from Financial Services who have capabilities similar to the McSweeney staff.

    - Competition in financial and general management consulting would be intense. Not only would competition come from the big eight accounting firms, but BCS would also be competing with well-known firms such as Booz Allen and McKinsey.

- The only aspect of McSweeney's business which has potential is its Profit Planning Model. However, INPUT does not recommend acquiring the product without further investigation of its potential. Reasons for this:

    - The model appears to be oriented towards the thrift industry and may not be applicable to commercial banks, thus limiting the number of potential users.

    - There are only a small number of thrift institutions large enough or sophisticated enough to use a financial model.

    - McSweeney's Model has been on GE's network for six years and only has 35 clients. Although the small number of clients may be attributable to poor marketing, it could also mean a limited number of potential users. (It is possible that McSweeney currently has 20% of the existing market.)

    - The highest growth area for the Model would be with thrift institutions on the West Coast. Institutions in the Midwest and East Coast would represent a long sales cycle due to their small size. INPUT would caution BCS against acquiring a product which it could not offer nationally.

PROPRIETARY COMPUTER SYSTEMS

PROPRIETARY COMPUTER
  SYSTEMS, INC.
16625 Saticoy Street
Van Nuys, CA 91406
(213) 781-8221

Bill Barancik, President
Subsidiary of CISI
Employees: 175
Revenues, Fiscal Year End
  4/30/80: $10 Million (est.)

COMPANY BACKGROUND

- Proprietary Computer Systems (PCS) has been providing APL-based timesharing services since its founding in 1970. Through acquisitions and internal development, PCS has assembled a large library of APL programs. PCS was also the first non-IBM company to offer a commercial service using ATS, an on-line text-editing system.

- Historically, PCS has devoted a substantial part of its resources to the enhancement of APL and ATS, to incorporate features such as inputting from video terminals, mixed on-line and batch processing, and simplified instructions for nontechnical users.

- In March 1979, PCS was acquired by Compagnie International de Services en Informatique (CISI), a French-based computer services company which operates the largest commercial timesharing network in Europe.

  - To the best of INPUT's knowledge, CISI paid approximately $4 million in cash for PCS. All of PCS's stock was acquired in the transaction.

  - Prior to the acquisition, 40% of the stock was owned by Bill Barancik, 40% by Mrs. Barancik, and 20% was held by other company officers.

COMPANY OFFICERS

- Bill Barancik, Founder and President.

- James Koch, Vice President, Real Estate Systems, Accounting and Inventory System.

- Warren Jurran, Vice President, APL Product Development, System Programming and Corporate Accounts.

- Vic Diels, Senior Vice President, Federal Systems, Text Product Development and Raw Machine Marketing.

- Allen Foster, Vice President, Production Services.

- Delbert Letourneau, Vice President, National Timesharing Manager.

INPUT

- Norman Williams, Vice President, Data Bases.

- Dan Peterson, Vice President, Finance and Administration.

- Ed Keyes, Director, Banking Services

FINANCIAL INFORMATION

- PCS's FY 1980 revenues were approximately $10 million (exact figures could not be obtained), up 40% over the preceding year. With the exception of its first quarter of operations, PCS stated it has always been profitable.

KEY PRODUCTS AND SERVICES

- PCS derives 100% of its revenues from processing services, with its APL-based business contributing the largest share.

- The major strength of PCS is its problem-solving tools which allow nonprogrammers to write and run their own programs.

  - Key proprietary products in this category are:

    - PCS/INFO^{tm}, an on-line data base management system, introduced three years ago.

    - PCS/REPORT, a management report-writing system, released five years ago.

    - PCS/DBM, a data base manager for manipulation of large data bases. (Currently in a test mode, will be released this summer.)

- PCS has been offering on-line text processing services (PCS/TEXT^{tm}) since 1970. Over the years, PCS has continued to enhance TEXT and has added complementary services to address the needs of office automation.

  - PCS/ARISTOTAL^{tm}, an information management system which allows for manipulation of textual materials and combinations of text, tabular and numeric information.

  - PCS/PHOTOCOMP^{tm} takes TEXT processed documents and prepares them for automatic photocomposition.

  - PCS/Electronic Mail.

  - PCS/LETTERCOMP, a sophisticated system for automatically preparing letters with variable inserts that personalize the message.

- Because of APL's exceptional facility for manipulating arrays of data, PCS has developed or acquired licensing rights for several financial analysis and related services.

    - Key products are:

        . PCS/BANKMODEL^{tm}, for analyzing, manipulating and projecting balance sheet data.

        . PCS/FORECAST^{tm}, a decision-making tool for budgeting, forecasting, price analysis, preparing pro forma financial statements and making cost estimates.

        . TAFS^{tm} (Trust Account Fee System), a major enhancement to a basic personal trust accounting system in which fees and profits are closely monitored and controlled.

        . STIMS^{tm} (Short Term Investment Management System), providing hourly and daily account management of a wide variety of short-term investment instruments.

    - TAFS and STIMS were joint developments of PCS and the First National Bank of Denver.

- PCS has capitalized on its TEXT software to develop specialized products for attorneys, engineers and architects.

    - PCS/LITIGATION AUTOMATION is a system for creating and using large computerized files of litigation documents.

    - PCS/SPEC^{tm} is an on-line system for creating customized construction specifications from a library of master specifications written in the Construction Specification Institute (CSI) format.

MARKET STRATEGIES

- PCS's strength and reputation in the industry have been built on excellent systems software targeted at the commercial timesharing market.

- High growth areas and areas of expansion will be in:

    - Electronic mail and photocomposition services in addition to its text processing software.

    - Developing better and more specialized software to address the requirements of financial institutions.

    - Adding econometric, energy-related and international aviation scheduling data bases to its network service.

INPUT

- PCS's parent organization, CISI, has maintained a low profile in the company. So far, there has not been any exchange of products or joint marketing efforts between the companies.

    - Data bases on CISI's European network service are currently being evaluated and may be placed on PCS's network if there appears to be domestic interest.

OFFICE LOCATIONS

- PCS maintains 12 branch office locations. On average, there are about five employees per office. The smallest office is in Honolulu (two employees) and the largest is Washington, D.C. (seven employees).

- Other than those indicated, most of PCS's offices have been established for four to seven years.

    - Costa Mesa, CA (opened within the last two years).

    - San Francisco.

    - San Diego.

    - Sunnyvale, CA (opened within the last two years).

    - Phoenix.

    - Denver.

    - Houston.

    - Dallas (opened in 1980).

    - Honolulu.

    - Chicago.

    - New York (opened within the last two years).

    - Washington, D.C.

- PCS is considering opening an office in Montreal this year.

DATA CENTER

- PCS maintains one data center at its headquarters. RJE facilities are located in Sunnyvale (CA), Chicago and Washington, D.C.

- 58 -

- PCS has developed its own network (PCS/COMPUTERNET) for local dial-up to eleven cities. Leased lines and TYMNET are used for other locations.

- Equipment in the center consists of an IBM 3031 and a 370/158-3, both operating under OS/MVT and HASP. An additional 158-3 is on order. The hardware configuration includes 24 3350 and 3330 type magnetic disk drives, 15 magnetic tape drives, one Documation and three IBM high-speed line printers.

    - PCS maintains a Word Processing Center and a data entry facility for handling customers' overflow and/or data entry requirements.

ASSESSMENT OF PCS

- PCS would be an excellent acquisition candidate for BCS. It has a good product line of APL-based services, an established client base, and a qualified staff of technical and marketing people who understand the RCS business. However, it is highly unlikely that CISI would consider selling PCS at this point in time.

    - CISI's acquisition of PCS indicates plans are in place for expansion into the U.S. market.

    - There is a high probability that CISI will be acquiring additional companies and products to expand its U.S. business.

INPUT